

On the possible phenomenological autonomy of virtual realities[†]

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ABSTRACT: In the following article, I examine Martin Heidegger's philosophy of dwelling with a view to its importance for the concept of 'place'. It is my interest to show how a phenomenological concept of place can elucidate the phenomenology of virtual reality. I begin by contextualising the investigation through a presentation of Jeff Malpas' concept of the non-autonomy of the virtual, and argue for a clearer understanding of the notion of causal non-autonomy. Furthermore, I argue that the autonomy or lack thereof of virtual reality should not lead to the conclusion that virtual reality cannot be experienced and examined as a self-standing entity; that in order to properly understand virtual reality, we cannot limit ourselves to the reductionistic view presented by Malpas, but must account also for the phenomenology of experiencing virtuality – and under such a phenomenological consideration, the distinctions made between non-virtual and virtual reality are made more diffuse. I then argue that we can plausibly accept that places may exist in virtual reality, despite current technological and practical limitations. In addition, I go on to consider some possible metaphysical differences between virtual and non-virtual places.

KEYWORDS: Heidegger, immersion, phenomenology, telepresence, topology, virtual reality

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Introduction

In the current day and age, the world seems dominated by a new layer of or addition to existence. The addition of (largely digital) virtual elements to our everyday life seems to alter our relation to our surroundings in yet-to-be-determined ways. Besides – or on top of – the places that we are used to, such as our cities, homes and workplaces, new places, relations and ontological fields are created. As Eric Gordon and Adriana de Souza e Silva write about the modern-day person,

[t]he city...does not end with the visibly observable. It contains annotations and connections, information and orientations from a network of people and devices that extend well beyond what is in front of [them] (Gordon & de Souza e Silva, 2011, p. 1).

Along with what is seemingly an addition to the ontological field of our existence comes also a new vocabulary that lets us describe these new phenomena: cyberspaces, net-dwellers, digital natives, and so on. This discourse seems to suggest the coming-into-existence of a new place, in which one can operate, be an inhabitant or even a native. But the nature of such a digital-virtual place is not clear cut. Current research into understanding virtuality spans a wide range of topics, both philosophical and technical. From understanding the connection between the experience of virtual 'presence' and the notion of selfhood (Blanke & Metzinger, 2009) and exploring how virtual reality experiences might shed light on our theories of the human mind and consciousness (Friston, 2010; Hohwy, 2014;

Clark, 2015), or how the virtual domain establishes a sense of temporality (Clowes & Chrisley, 2012), to understanding the phenomenon of 'tele-immersion' (Ohl, 2018), virtual embodiment and re-embodiment (Petkova & Ehrsson, 2008; Cohen et al., 2012; 2014a; 2014b; De Oliveira et al., 2016) to the experience (and graduation of) realness (Metzinger, 2018) and through matters of epistemology such as understanding the distinction between dreaming, or other suboptimal epistemic situations and waking experience (e.g. Bortolotti, 2015; 2016) and the question of assigning personal identity to other agents (Madary & Metzinger, 2016), which itself poses further questions of an ethical and legal character (for much more on the perspectives of philosophy and virtuality, see Metzinger, 2018).

It is the claim of this article, along with many others, that understanding the phenomenon of this emerging domain of virtuality requires not just examining 'from the outside' how it is constituted and governed, but also, as the phenomenological slogan of Edmund Husserl would have it, that we go to the things themselves and concern ourselves with what it is like to experience a virtual reality. This article contends that the experience of being in a virtual reality belongs to a special group of phenomena that can best be described in the vocabulary of philosophical topology.

In this article, I intend to do three things. First, I will contextualise the investigation by discussing the objections to the idea of the autonomy of virtual realities presented by the Heidegger scholar and phenomenological topologist, Jeff Malpas. Second, I will present a reading of Martin Heidegger's '*Bauen, Wohnen, Denken*' (Building, Living, Thinking) in order to

develop a useful concept of place and, finally, I intend to employ this concept in order to argue for the possible phenomenological autonomy of virtual places, which is understood here specifically as the places that are afforded by modern digital virtual reality technology, e.g. the Oculus Rift, the Playstation VR, the Google Cardboard, etc. As such, what is meant here by virtual reality is exactly the sort of digitally generated environment which is made available through interaction with certain technological gear and which to some degree offers the user a sense of presence, defined as

a psychological state or subjective perception in which even though part or all of an individual's current experience is generated by and/or filtered through human-made technology, part or all of the individual's perception fails to accurately acknowledge the role of the technology in the experience (International Society for Presence Research, 2000).

Acknowledging this limit in scope of the article also means that I do not consider more general arguments of how the concept of virtuality could enlighten the concept of place and vice versa (for this, see, e.g. Janz, 2018).

Malpas and the 'non-autonomy of the virtual'

One possible way of distinguishing between the virtual and the non-virtual is by following Malpas in asserting a fundamental metaphysical asymmetry between the two 'realms'. Malpas does so by claiming that 'strictly speaking, the virtual is merely another part or aspect of the everyday world – and this is an important element in the very idea of the non-autonomy of the virtual' (Malpas, 2009, p. 135). The virtual is thus non-autonomous in relation to the non-virtual in two distinct ways: 1) causally non-autonomous; and 2) contentually non-autonomous.

Regarding the causal non-autonomy, Malpas argues that the existence of the virtual is causally dependent on structures outside the virtual realm (e.g. physical computer servers, the power infrastructure, etc.) and that our interaction with the virtual world is, in the end, afforded to us by our physical bodies and senses, which are not themselves virtual, for example by using a head-mounted display, mouse/keyboard and a computer screen. Taken in this strictly causal sense, it seems hard to refute the claim of virtual non-autonomy.

Assessing the concept of contentual non-autonomy is another matter. Malpas claims that contentual non-autonomy consists in the fact that 'the content that is embodied in the virtual is always dependent on the everyday world in which the virtual is embedded' (ibid., p. 136). This is because we experience the virtual through certain 'frames of significance' which we, according to Malpas, bring with us from the non-virtual. Furthermore, Malpas claims that it is a 'fact that the genuine agents who operate within virtual domains are always individuals whose existence is based in the everyday, and not in the virtual alone' (ibid.). This, however, seems to be a historical-empirical claim and not actually a principled or essential objection. At the very least, it is unclear how we should understand the core term 'existence' here. What does it mean for the existence of these individuals to supposedly be based in the everyday (i.e. the non-virtual), despite their attachment and goings-on in a virtual domain? Considering that Malpas emphasises the fact that any virtual reality is produced and maintained by physical

structures and other non-virtual entities and processes it would seem that 'existence being based' here means something like being physically and causally made possible. In other words, claiming that an individual's existence is always based in the non-virtual everyday is claiming that the virtuality does not have the cause of its continued upholding within itself. We might call this the causal-reductionist interpretation of 'existence' (in the sense that it is reduced to its causal-physical components). However, in that case we must make a distinction between reductionist existence in this sense and the everyday existence in a less narrow phenomenological sense – namely one that focuses less on causal-physical circumstances and more on the lived phenomenal experience of individuals. Even Malpas' use of the term 'everyday', as if in opposition to virtual reality, seems to distort the phenomenal reality of virtual reality. Malpas (2009, p. 136) writes that

[e]ven those individuals who view their lives as primarily oriented around their virtual activities – individuals who may spend the majority of their waking hours in some on-line domain such as Second Life, and may even make a living from their activities there – still live everyday existences in the everyday world.

It certainly seems counterintuitive to claim that a person's everyday could be constituted by a field of meaning and practices that they supposedly interact only very sparsely with. In that case, it must be asked whether we gain any insight into the specific phenomenon of virtuality through the reductionist concept of 'everyday' which is employed – and whether there might be another, more fruitful, understanding.

From a phenomenological perspective, the everyday is often understood through the Husserlian concept of a lifeworld, which according to David Seamon is 'the everyday realm of experiences, actions, and meanings typically taken for granted and thus out of sight as a phenomenon' (Seamon, 2017, p. 248). This phenomenal 'everyday', which is also evoked by Heidegger in his concept the worldliness of the world in being and time (Heidegger, 2010, §18), is a fundamental and primary structure of meaning and reference, which is more primary than any (deliberate or accidental) breakdowns during which we come to regard our world and the entities in them not as items available to me in my projects, but as peculiar objects in themselves (ibid., §16). Husserl has a similar view, which he exemplifies by how the everyday constitutes the meaningfulness of a piece of coal:

I see coal as heating material; I recognize it and recognize it as useful and as used for heating, as appropriate for and as destined to produce warmth...I can use [a combustible object] as fuel; it has value for me as a possible source of heat. That is, it has value for me with respect to the fact that with it I can produce the heating of a room and thereby pleasant sensations of warmth for myself and others...Others also apprehend it in the same way, and it acquires an intersubjective use-value and in a social context is appreciated and is valuable as serving such and such a purpose, as useful to man, etc. (Husserl, 1989, pp. 196–197).

This phenomenological understanding of the everyday lifeworld certainly does not exclude the possibility that one's everyday may on principle be constituted within the virtual domains. And more importantly a phenomenological understanding in

this sense would also accentuate the fact that such a lifeworld which originates in virtual reality would still be fundamental and primary with regard to the 'objective' reductionist circumstance of the physical-causal non-autonomy that Malpas describes, such that the individual within virtuality would still regard the virtual lifeworld with Husserl's 'natural attitude' (Husserl, 2014, §27). Or in other simpler terms that Malpas' identification of the 'everyday' with the non-virtual is simply a matter of limited perspective and not of principle.

Malpas claims, and I believe rightfully so, that virtual reality is 'causally or physically dependent on the physical infrastructure that enables it' (2009, p. 137). Even the further claim that 'so too must the virtual activities and virtual lives of agents within the virtual supervene upon a set of everyday processes and structure that themselves underpin the agents' existence' (*ibid.*) could be granted if it were meant in a physiological sense (e.g. that certain bodily processes are necessary for the interaction with the virtual through objects such as head-mounted displays or a mouse/keyboard setup). However, it does not hold that there must necessarily be a connection, through the singular agent-body, between social/cultural (contentual) aspects of the non-virtual and the virtual. In fact, as Nancy K. Baym notes, '[m]any scholars have noted that digital media, especially the internet, disrupt the notion held dear in many cultures that each body gets one self' (2015, p. 118).

Of course, for the most part it may empirically be the case that one's virtual persona is created by (re)mixing certain already non-virtually existing tropes, concepts and ideas; one easily graspable example being performing as another gender in a virtual space. Yet employing the same building blocks does not make it meaningfully non-autonomous in the contentual sense, considering that these building blocks may go on to evolve in quite different ways within and without the virtual domain – and that new content may develop independently within the virtual, such as the emergence of internet paralanguages (e.g. internetspeak, or 'lolspeak'), memes and more.

So, while it may objectively be the case that the virtual reality supervenes on, or is causally afforded by, physical structures and processes, this does not preclude the possibility that virtual reality lifeworlds may exist and that these may operate within a place which is phenomenologically independent of the non-virtual. In the following, I will present a reading of Heidegger's philosophy of place and show how understanding the phenomenon of virtual reality through a phenomenological concept of 'place' can help us attain a greater understanding of this independence relation.

Heidegger and place

Naturally, we must first have a grasp of what a 'place' is before we can go on to see how the concept could apply to virtual realities. In presenting an applicable concept of place, I will draw on the philosophy of Martin Heidegger, in a reading of his philosophy of dwelling inspired, among other things, by Marc Augé's 'Non-places' (Augé, 2008; for a more in-depth comparison of the two, see Ottesen 2020).

According to Heidegger, a place (or location, as the translation of Heidegger has it) is a thing that 'allows a space into which *earth* and *heaven*, *divinities* and *mortals* are admitted' (Heidegger, 1971, p. 153; emphasis added). This claim is, of course, quite unintelligible on its own without the proper

context to understand what these four terms (which stand in a tight-knit self-relational structure that Heidegger refers to as the fourfold) mean. The earth and heaven are respectively described as

the serving bearer, blossoming and fruiting, spreading out in rock and water, rising up into plant and animal [and] the vaulting path of the sun, the course of the changing moon, the wandering glitter of the stars, the year's seasons and their changes, the light and dusk of day, the gloom and glow of night, the clemency and inclemency of the weather, the drifting clouds and blue depth of the ether (Heidegger, 1971, pp. 147–148).

In short, earth and heaven are the finite conditions that have befallen us as inhabitants of our world, the physical circumstances which make up the conditions of our existence – not to be understood here in a naturalistic-scientific sense, but in the sense of the Greek *physis*, which, according to Heidegger, means an 'emerging and rising in itself and in all things' which 'clears and illuminates, also, that on which and in which man bases his dwelling' (Heidegger, 1971, p. 41) and 'the being that grows out of its own accord' (*ibid.*, p. 58). In complementary opposition to these two aspects of *physis* are two aspects which I will call 'cultural': divinities and mortals. The mortals are human beings, here defined by their mortality. The divinities are, following Julian Young, role models, whether historical, fictive, religious or mythological (Young, 2000; 2011). They are the embodiments or epitomes of the values and normative expectations of a given socio-cultural context – and the religious nomenclature used by Heidegger should not diffuse the point that the divinities need not be of a religious nature themselves.

Having briefly sketched the contents of these four aspects of the fourfold, an explanation must be given for how these are connected to places. In doing so the reader will have to excuse me for quoting Heidegger's own example at length. He asks us to

think for a while of a farmhouse in the Black Forest, which was built some two hundred years ago by the dwelling of peasants. *Here the self-sufficiency of the power to let earth and heaven, divinities and mortals enter in simple oneness into things, ordered the house.* It placed the farm on the wind-sheltered mountain slope looking south, among the meadows close to the spring. It gave it the wide overhanging shingle roof whose proper slope bears up under the burden of snow, and which, reaching deep down, shields the chambers against the storms of the long winter nights. It did not forget the altar corner behind the community table; it made room in its chamber for the hallowed places of childbed and the 'tree of the dead' – for that is what they call a coffin there: the *totenbaum* – and *in this way it designed for the different generations under one roof the character of their journey through time* (Heidegger, 1971, pp. 157–158; emphasis added)

In this contemplation on the traditional *Schwarzwaldhaus* (Black Forest house), Heidegger lets us see how the construction, function, and meaning of the house and its interior spaces are not invented *ex nihilo* or devised beforehand in some abstract space and then 'realised' in the building. Rather, the farmhouse is born out of the fourfold, or in other words, the fourfold is

gathered in the farmhouse, such that earth and heaven are given alongside the design and placement of the house, and mortals and divinities are given alongside the hallowed place, the altar corner and the community table. At the same time these things themselves achieve their specific meaning and purposefulness because of their relation to the fourfold. This more (although perhaps, in a Heideggerean view, too) formal understanding may also show why Heidegger's understanding of dwelling and places for dwelling is not, as it is sometimes claimed, just an expression of nostalgic yearning. The *Schwarzwaldhaus* is an exemplary place, but in no sense the only place possible, when understanding properly the fourfold.

Returning for a moment to Husserl, one might claim that the idea of the fourfold in this way resembles the idea of the lifeworld – a structure within which meaning is given to practices and entities. Thus, the phenomenological notion of the everyday, as discussed above, has a close connection to this concept of place, because the everyday is given by and comes to show in and through the place. It also serves to highlight that there is no definitive 'lifeworld' or 'everyday'. For example, David Seamon (2017, p. 248) argues that 'in relation to architecture, we can speak of the individual lifeworlds of all individuals and groups associated with a building, but we can also speak of the lifeworld of the building itself'. Thus, the lifeworld of the everyday is constituted, at least in part, by places and our place in them. So, although there is rightly a lifeworld that is centred, so to speak, in the individual body-person – which is the relevant contentual node of connection between the virtual reality and the non-virtual reality domains in Malpas' view – it is wrong to assume that this lifeworld is the only or the more phenomenologically primary one.

Before moving on, there is still another question to be examined; namely, what actually happens as such a thing as a place comes to be? It is not the case that places are merely put into an already existing configuration that would then go on to determine their properties – as if the fourfold was some already-determined formula that could be applied directly. Rather, an event occurs when a place is built and placed. As Heidegger writes, regarding the example of a bridge crossing a river, 'it does not just connect banks that are already there. The banks emerge as banks only as the bridge crosses the stream' and 'with the banks, the bridge brings to the stream the one and the other expanse of the landscape lying behind them. It brings stream and bank and land into each other's neighbourhood' (Heidegger, 1971, p. 150).

When we consider and experience the place of the bridge, this place is not simply identical with the physical properties of said bridge. The place is the continuous occurrence of a (re)shaping and (re)populating of the ontological field – revealing the Being of beings in new ways. The bridge place is not the physical bridge but transcends it. Following this motif with regard to a possible place of virtual reality, this means that although a virtual reality place may be constituted digitally by code on physical servers and supported by a network of physical objects, the places themselves are not to be equated with this physicality, just as the bridge is not merely the steel beams it is constructed with. It is on this further level that I believe one could find something such as the distinction between physical and phenomenological autonomy of the virtual reality.

One should not then, as Malpas seems to do, make the mistake of equating the objects (servers, power infrastructure, head-mounted displays, etc.) with the places that may be afforded by them, thus concluding that these places are in an unproblematic sense 'part of' the everyday. Reading Heidegger's depiction of the place-giving of the bridge allows us to understand the virtual place given by the digital-technological hardware in a way that separates the physical object from the place that it co-constitutes and may in turn also allow us to separate the virtual place-realm from the physical objects and non-virtual cultural entities that make a place for it. Yet this is not to say that non-virtual and virtual places are of the exact same sort. They are quite clearly demarcated (at least) by the epistemological situation we can be in with regard to their constitution. We obviously can be in a position to see and know from the 'outside' that the virtual place is run by computers, that it is entered through affordances offered by certain hardware and that it may be exited. However, this is a contingent epistemological situation. We could very well imagine that this were not the case (e.g. by never having experienced any of the non-virtual, as in the case of *The Matrix*, or simply having forgotten upon entering the virtual). In addition to the epistemological distinction, the two might very well, for both principled and practical reasons, differ in their experiential richness (for an overview of some of the cues associated with such richness, see Baym, 2015). Nevertheless, I claim that there is an achievable phenomenological autonomy within the virtual environment that cannot be captured by focusing on physical objects and their causal relations to a digitalised space; an experience of 'being there', of presence, in a place which does not reach beyond the borders of the virtual reality.

All of this is, however, still begging the answer to one very important question: does it even make sense to talk about places within virtual reality? In the following, I will argue that this question should be answered in the positive, while also expanding on the characteristics of such virtual places, granting that they cannot be straightforwardly regarded as completely identical to non-virtual places.

Virtually a place? The relation between virtual and non-virtual places

As I now aim to consider whether there can on principle be virtual places and furthermore what could characterise the being and the phenomenology of such a place, there are two related questions that I do not intend, and which for clarity's sake will be made explicit here; I do not intend to show nor argue that there are or have been as an empirical fact such places. Neither do I intend to show in exhaustive detail what characteristics different types of virtual realities might have. I intend only to show that we can on principle conceptualise places within virtual realities and how considering virtual reality through the theoretical lens of 'placehood' can bring to light another aspect of virtuality which seems forgotten in what I have claimed is a narrow reductionist approach exemplified by Malpas above.

Following the characterisation of the place given above, if there are to be places in virtual reality (or, if virtual reality itself should be considered a place), they have to somehow correspond to the motif of gathering the fourfold. That would mean that there had to be things within the virtual domain which

refer to and in turn are referred to by others in a socio-relational sense (the mortals), to culture and value in a cultural-historical sense (the divinities), and to some sort of grounding, given limitations and processes (the earth and heaven). Yet, these cannot be references to entities outside of the virtual since this would uphold the contentual non-autonomy. Inspired by such analysis as Hagström (2017) and Reinhard (2018), I will claim that this possibility is not implausible.

Often, established fictional worlds lay the ground for some of the more comprehensive commonplace virtual settings: Middle Earth, the world in which *The Lord of the Rings* takes place, Azeroth, the setting of the popular MMORPG *World of Warcraft* and the Forgotten Realms, just one of the many, rich historical settings of the popular Dungeons and Dragons roleplaying game. Such places all share the fact that they have rich cultural histories, which can serve as described above in the Heideggerian notion of the fourfold place as I believe Reinhard (2018) shows with his landscape archaeology of the town Rorikstead in the *Skyrim* VR game.

Concerning the formation of social relations in the virtual domain, it could be objected that any such relations would be of a different kind than non-virtually formed relations, insofar as these are 'abandon-able' through simply exiting and never re-entering the virtual domain in which they were formed and maintained – and thus not as strong and more ephemeral than non-virtual relations, and that the range of social cues available are greatly impoverished, which would lead to a lack of socialisation and attachment. However, such objections rely at least in part on the empirical-practical assumption that they must necessarily be the case. Yet, both are a practical-technological problem and not a principled problem against the virtual – a matter, rather, of the technologies and methods we use to access these virtual places. This is, of course, a broad topic in need of multi-disciplinary analysis and one which cannot be completely accounted for in this current article. However, even granting that the social relations within the virtual reality may differ in intensity or even type, this does not change that in order for a virtual reality location such as Rorikstead to constitute a place in the rich Heideggerian sense, it must include elements which refer to the presence of others in such a way that these others belong to the ontology of the virtual reality rather than breaching the barrier into the non-virtual (which would, of course, undermine the phenomenological autonomy of the virtual place). That is to say, the salient point is not whether social relations are stable or intense, but whether the elements of the social relation can exist within the virtual reality ontology only – a possibility which I personally as a long-time role player within *World of Warcraft* can attest to and which I do not find any principled arguments against.

Then there is the question of the finitude of our surroundings – in the sense of given form-giving limits – which would, of course, at first glance seem very unlikely to occur in a virtual reality domain since we usually recognise that such digital domains are created and thus recreate-able by human agents and thus the virtual domain does not actually constitute a finitude, but an ever-amendable and repurpose-able environment – what Heidegger would designate as the mode of being associated with enframing (*Gestell*) (Heidegger, 2013). However, as Heidegger himself also notes, the essence of technology (i.e. the mode of being named 'enframing') is not identical with any technological object or entity – the mode of enframing is no

technological object, but a mode of being (Heidegger, 2013). This understanding should serve as our cue to move on. This would mean that despite it being technologically constructed, the virtual place must not necessarily be in the mode of enframing. These two, being a piece of technology and being in the mode of enframing, may be separated. In fact, for most inhabitants of present-day virtual realities, no great level of malleability is available.

What I have argued here is that it is possible on principle for the virtual reality to gather all of these elements of the fourfold in a place (such as Rorikstead above) as Heidegger's *Schwarzwaldhaus* did, thus making them places in this rich sense and that this could be achieved without breaking the barrier between virtual and non-virtual reality.

In addition to the above considerations, the concept of immersion is key to understanding the phenomenon of virtuality. It is defined differently throughout the literature on virtual reality, one example being that of David Chalmers, who defines a virtual reality environment as immersive, insofar as it generates a 'perceptual experience of the environment from a perspective within it, giving the user the sense of "presence"' (Chalmers, 2017, p. 3). Other understandings make more detailed distinctions, such as Grabarczyk and Pokropski's (2016) distinction between immersion and presence, with the former referring to the properties of the system that facilitate the experience of a psychological feeling of 'being here in this place', which is the experience of presence – thus mirroring to a degree a distinction between the causal-physical and the phenomenological aspects of virtuality. There are, of course, scores of immersion/presence definitions (see e.g. Skarbez et al., 2018), but the central understanding is a sense of 'being there' in a given environment (or perhaps more adequately, a landscape) (see e.g. Relf, 2018).

The current importance of the concepts of immersion and presence is the possibility of immersion breaks and how these phenomena can negatively imply the phenomenological autonomy of virtual reality place that is at play. Immersion breaks are defined as the moment when the individual experiencing the virtual reality environment is made aware of the non-virtual environment in a way that disturbs the consistent totality of the virtuality (Slater, 2009; Grabarczyk & Pokropski, 2016) such as the user of a head-mounted display bumping into things in their living room, hearing noises from 'outside' the virtual domain, or other disturbances. Maintaining virtual immersion then means 'blocking out' non-virtual inputs. But simply having immersion (presence) in the first place already requires something like having a lifeworld or a place – in simple terms, there can be no experience of presence without that presence being placed. This place cannot be in the non-virtual reality, since this would constitute a break of immersion. There are of course empirically many hindrances to achieving this (many of a practical-technical nature), yet on principle it does not make sense to claim the virtual to be simply a part of the non-virtual lifeworld; or perhaps more precisely, because of the blocking out of immersion breaks, the virtual domain is a part of (contained in) the non-virtual, but the non-virtual is not necessarily present in the virtual (I have discussed this particular phenomenon elsewhere under the concept of 'second-order places', see Ottesen 2020). In a Husserlian sense, the object that I am intentionally directed to while in the virtual place is not in any way the computations going on 'underneath' the virtuality presented to me, nor the

physical hardware in and through which these computations are made possible – just as little as I am directed towards quantum or molecular processes in the non-virtual everyday. Although, in a physical sense, those processes certainly underlie my personal experience. I am directed at the earth and heaven, the mortals and the divinities – even if in the case of virtuality, we may, from an outside perspective, be able to determine that there is something more to be seen. One must admit that when achieved, this sort of immersion phenomenologically supersedes the practical-biological fact of our physical embodiment. Even though our bodies are necessary wetware for accessing such VR environments such as *Skyrim's* Rorikstead, Reinhard still claims that during his project of scouting the landscape of western *Skyrim*, he 'forgot that I was wearing a headset while I was focused on getting around in the valley' (Reinhard, 2018, p. 33).

Yet following phenomenologists of embodiment, such as Merleau-Ponty, one might object that our experience is always embodied and that even the experience of presence in a virtual reality environment is only achievable by virtue of our non-virtual bodies interacting with the technology. On the level of topology, embodiment also plays an important role as Champion points out, claiming that our experience of place 'is affected by our physical embodiment and how we use and have trained our bodies', while 'place is also affected in turn by our embodiment' (Champion, 2018, p. 151).

Viewed this way, we never truly can escape the non-virtual in virtue of our physical embodiment. Of course, a thorough considerations of the implications of embodiment in relation to virtual reality is much too large a topic with much existing literature (see, for example, Schultze, 2010) to be included in this article. However, I will offer the following consideration: even going along with Merleau-Ponty, one might still claim the possibility of a virtual embodiment which phenomenologically supersedes (albeit perhaps temporarily) the physical-biological fact of our own bodies. This is because, according to Merleau-Ponty, our embodiment should not solely be understood by looking at our physical bodies, but rather at what he calls our body schemas. And these schemas, as we see with the analysis of the phantom limb (Merleau-Ponty, 2012), may differ drastically from the actual physical facts of our bodies. In fact, these schemas are not aligned with what Merleau-Ponty calls 'the objective body', but rather with the phenomenal body (*ibid.*). As such, Merleau-Ponty already implies the distinction that I have argued that Malpas and others miss, namely that between objective (or physical) and phenomenal. Furthermore, the analysis of embodiment in Merleau-Ponty also shows the possibility for 'habituation' (*ibid.*, p. 144), which is the process of 'expanding' my body schema by adapting to the use of objects that are not part of my objective body in a biological sense (e.g. walking with a cane or driving a car). Thus, one could experience a body schema in which one was phenomenally habituated to a virtual body (through the use of displays, goggles, controllers, etc.) without inclusion of the objective body, which of course lies outside the virtual reality domain (see also Kilteni et al., 2012).

Concluding remarks

Let us end by returning to Malpas' original remark, that the virtual is merely a 'part or aspect of the everyday world' (Malpas, 2009, p. 135). We can see now that what this claim might mean is ambiguous. It seems straightforwardly true

if understood in the causal-physical sense discussed in this article. But if it is taken to mean that the virtual reality place is simply something we interact with within the non-virtual place and that there are necessarily open borders between the two, it would be suppressing aspects of the phenomenon as it is given to the inhabitants of virtual domains. It is not the case that the virtual reality is simply an element within the non-virtual reality. This relation is phenomenologically speaking, cut off by immersion and the experience of presence. The two, virtual and non-virtual, are equally phenomenologically autonomous as places; they each can present themselves to the individual as all-encompassing environmental wholes of meaningful reference and relations, although (at least) one of them has the peculiar property of doing so in a way that must deny a physical-causal relation to something outside its own borders. The fact that we are sometimes in a privileged epistemological position by which we can assess the physical-causal relations of the virtual reality from 'the outside' should not distract us from the analysis of the experience from within.

We must take this phenomenological autonomy of the virtual lifeworld place seriously. Only because we can understand virtual reality as a valid phenomenological alternative to the non-virtual reality can we also begin to understand the distinctive problems that may occur with their proliferation; problems that may be seen in the personal, public-political, legal and ethical spheres – such as the question of personal identity, culpability, sociality, responsibility, and so forth. At the same time, this insight does not completely deny Malpas' point and necessitates that we also keep in mind the non-autonomy described, insofar as it is this fact that, in a critical perspective, makes virtuality doubly important – both for what goes on within the virtual domain as well as for how that may still have consequences outside of itself; in addition, Malpas' identification of a relation between the virtual and the non-virtual also serves as a foothold for understanding how, to lift a theme from Horkheimer, the non-virtual domain is a place that 'originates in human action and therefore is a possible object of playful decision and rational determination of goals' (Horkheimer, 2002, p. 207). In other words when dealing with the phenomenon of virtuality, we ought to consider both the causal-physical relations to non-virtuality, while at the same time recognising the experiential properties that can be examined through phenomenology.

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